

Product datasheet

Recombinant *E. coli* Thioredoxin / TRX protein  
ab115709

2 Images

Description

---

<b>Product name</b>	Recombinant <i>E. coli</i> Thioredoxin / TRX protein
<b>Purity</b>	> 95 % SDS-PAGE. ab115709 is purified by multi-step chromatography
<b>Expression system</b>	Escherichia coli
<b>Accession</b>	<a href="#">P0AA25</a>
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Escherichia coli
<b>Predicted molecular weight</b>	12 kDa
<b>Tags</b>	His tag N-Terminus

Specifications

---

Our [Abpromise guarantee](#) covers the use of **ab115709** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	SDS-PAGE Western blot Functional Studies
---------------------	--

<b>Form</b>	Liquid
-------------	--------

Preparation and Storage

---

<b>Stability and Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. Constituents: 0.61% Tris, 0.03% EDTA, 0.58% Sodium chloride
------------------------------	--

General Info

---

## Function

Participates in various redox reactions through the reversible oxidation of its active center dithiol to a disulfide and catalyzes dithiol-disulfide exchange reactions. Plays a role in the reversible S-nitrosylation of cysteine residues in target proteins, and thereby contributes to the response to intracellular nitric oxide. Nitrosylates the active site Cys of CASP3 in response to nitric oxide (NO), and thereby inhibits caspase-3 activity. Induces the FOS/JUN AP-1 DNA-binding activity in ionizing radiation (IR) cells through its oxidation/reduction status and stimulates AP-1 transcriptional activity.

ADF augments the expression of the interleukin-2 receptor TAC (IL2R/P55).

## Sequence similarities

Belongs to the thioredoxin family.

Contains 1 thioredoxin domain.

## Post-translational modifications

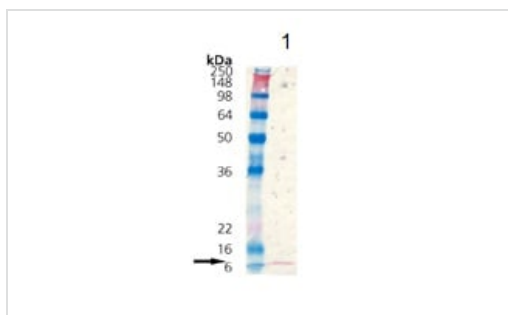
In the fully reduced protein, both Cys-69 and Cys-73 are nitrosylated in response to nitric oxide (NO). When two disulfide bonds are present in the protein, only Cys-73 is nitrosylated. Cys-73 can serve as donor for nitrosylation of target proteins.

In case of infection, ubiquitinated by *S.typhimurium* protein slrP, leading to its degradation.

## Cellular localization

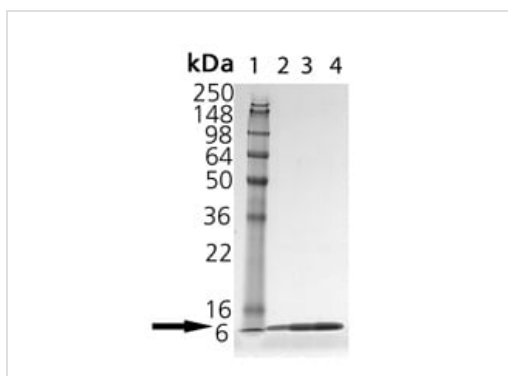
Nucleus. Cytoplasm. Secreted. Secreted by a leaderless secretory pathway. Predominantly in the cytoplasm in non irradiated cells. Radiation induces translocation of TRX from the cytoplasm to the nucleus.

## Images



Western blot - Recombinant *E. coli* Thioredoxin / TRX protein (ab115709)

Thioredoxin /TRX antibody + Recombinant *E. coli* Thioredoxin / TRX protein (ab115709) at 0.1  $\mu$ g



SDS-PAGE - Recombinant *E. coli* Thioredoxin / TRX protein (ab115709)

SDS-PAGE analysis

Lane 1: MW markers

Lane 2: ab115709 at 1  $\mu$ g

Lane 3: ab115709 at 2  $\mu$ g

Lane 4: ab115709 at 5  $\mu$ g

## **Our Abpromise to you: Quality guaranteed and expert technical support**

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
  
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

## **Terms and conditions**

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors